### § 121.13

- -Trinitronaphthalene
- —Trinitroxylene
- —Fuming nitric acid non-inhibited and non-enriched
- -Acetylene
- -Propane
- —Liquid oxygen
- —Hydrogen peroxide in concentrations less than 85%
- -Misch metal
- -N-pyrrolidinone and l-methyl-2-pyrrolidinone
- —Dioctylmaleate
- —Ethylhexylacrylate
- —Triethylaluminum (TEA), trimethylaluminum (TMA) and other pyrophoric metal alkyls and aryls of lithium, sodium, magnesium, zinc or boron
- —Nitrocellulose
- —Nitroglycerin (or glyceroltrinitrate, trinitroglycerine (NG)
- -2,4,6 trinitrotoluene (TNT)
- —Pentaerythritol tetranitrate (PETN)
- -Trinitrophenylmethylnitramine (Tetryl)
- -Ethylenediaminedinitrate (EDDN)
- Lead azide, normal and basic lead styphnate, and primary explosives or priming composition containing azides or azide complexes
- -Triethyleneglycoldinitrate (TEGDN)
- -2,4,6-trinitroresorcinol (styphnic acid)
- —Diethyldiphenyl urea, dimethyldiphenyl urea and methylethyldiphenyl urea (Centralites)
- —N,N-diphenylurea (unsymmetrical diphenylurea)
- —Methyl-N,N-diphenylurea (methyl unsymmetrical diphenylurea)
- Ethyl-N,N-diphenylurea (ethyl unsymmetrical diphenylurea)
- -2-nitrodiphenylamine (2-NDPA)
- -4-nitrodiphenylamine (4-NDPA)
- -2,2-dinitropropanol
- —Chlorinetrifluoride.

[58 FR 60113, Nov. 15, 1993]

## §121.13 Military fuel thickeners.

Military fuel thickeners in Category V include compounds (e.g., octal) or mixtures of such compounds (e.g., napalm) specifically formulated for the purpose of producing materials which, when added to petroleum products, provide a gel-type incendiary material for use in bombs, projectiles, flame throwers, or other defense articles.

### §121.14 [Reserved]

# §121.15 Vessels of war and special naval equipment.

Vessels of war means vessels, waterborne or submersible, designed, modified or equipped for military purposes, including vessels described as developmental, "demilitarized" or decommissioned. Vessels of war in Category VI, whether developmental, "demilitarized" and/or decommissioned or not, include, but are not limited to, the following:

- (a) Combatant vessels: (1) Warships (including nuclear-powered versions):
  - (i) Aircraft carriers.
  - (ii) Battleships.
  - (iii) Cruisers.
  - (iv) Destroyers.
  - (v) Frigates.
  - (vi) Submarines.
  - (2) Other Combatants:
- (i) Patrol Combatants (e.g., including but not limited to PHM).
- (ii) Amphibious Aircraft/Landing Craft Carriers.

  (iii) Amphibious Material/Landing
- (iii) Amphibious Materiel/Landing Craft Carriers.
  - (iv) Amphibious Command Ships.
  - (v) Mine Warfare Ships.
- (vi) Coast Guard Cutters (e.g., including but not limited to: WHEC, WMEC).
- (b) Combatant Craft: (1) Patrol Craft (patrol craft described in §121.1, Category VI, paragraph (b) are considered non-combatant):
  - (i) Coastal Patrol Combatants.
- (ii) River, Roadstead Craft (including swimmer delivery craft).
- (iii) Coast Guard Patrol Craft (e.g., including but not limited to WPB).
  - (2) Amphibious Warfare Craft:
- (i) Landing Craft (e.g., including but not limited to LCAC).
- (ii) Special Warfare Craft (e.g., including but not limited to: LSSC, MSSC, SDV, SWCL, SWCM).
- (3) Mine Warfare Craft and Mine Countermeasures Craft (e.g., including but not limited to: MCT, MSB).
- (c) Non-Combatant Auxiliary Vessels and Support Ships:
- (1) Combat Logistics Support:
- (i) Underway Replenishment Ships.
- (ii) Surface Vessel and Submarine Tender/Repair Ships.
  - (2) Support Ships:
  - (i) Submarine Rescue Ships.
- (ii) Other Auxiliaries (e.g., including but not limited to: AGDS, AGF, AGM, AGOR, AGOS, AH, AP, ARL, AVB, AVM, AVT).

(d) Non-Combatant Support, Service and Miscellaneous Vessels (e.g., including but not limited to: DSRV, DSV, NR, YRR).

[58 FR 60115, Nov. 15, 1993]

# §121.16 Missile Technology Control Regime Annex.

Some of the items on the Missile Technology Control Regime Annex are controlled by both the Department of Commerce on the Commodity Control List and by the Department of State on the United States Munitions List. To the extent an article is on the United States Munitions List, a reference appears in parentheses listing the U.S. Munitions List category in which it appears. The following items constitute all items on the Missile Technology Control Regime Annex which are covered by the U.S. Munitions List:

#### ITEM 1—CATEGORY I

Complete rocket systems (including ballistic missile systems, space launch vehicles, and sounding rockets (see §121.1, Cat. IV(a) and (b)) and unmanned air vehicle systems (including cruise missile systems see §121.1, Cat. VIII (a), target drones and reconnaisance drones (see §121.1, Cat. VIII (a)) capable of delivering at least a 500 kg payload to a range of at least 300 km.

### ITEM 2—CATEOGRY I

Complete subsystems usable in the systems in Item 1 as follows:

- (a) Individual rocket stages (see §121.1, Cat. IV(h));
- (b) Reentry vehicles (see §121.1, Cat. IV(g)), and equipment designed or modified therefor, as follows, except as provided in Note (1) below for those designed for non-weapon payloads:
- (1) Heat shields and components thereof fabricated of ceramic or ablative materials (see \$121.1, Cat. IV(f));
- (2) Heat sinks and components thereof fabricated of light-weight, high heat capacity materials:
- (3) Electronic equipment specially designed for reentry vehicles (see §121.1, Cat. XI(a)(7));
- (c) Solid or liquid propellant rocket engines, having a total impulse capacity of  $1.1 \times 10$  N-sec (2.5 x 10 lb-sec) or greater (see §121.1, Cat. IV, (h)).
- (d) "Guidance sets" capable of achieving system accuracy of 3.33 percent or less of the range (e.g., a CEP of 1 j., or less at a range of 300 km), except as provided in Note (1) below for those designed for missiles with a range under 300 km or manned aircraft (see §121.1, Cat. XII(d));

- (e) Thrust vector control sub-systems, except as provided in Note (1) below for those designed for rocket systems that do not exceed the range/payload capability of Item 1 (see § 121.1, Cat. IV);
- (f) Warhead safing, arming, fuzing, and firing mechanisms, except as provided in Note (1) below for those designed for systems other than those in Item 1 (see §121.1, Cat. IV(h)).

#### NOTES TO ITEM 2

- (1) The exceptions in (b), (d), (e), and (f) above may be treated as Category II if the subsystem is exported subject to end use statements and quantity limits appropriate for the excepted end use stated above.
- (2) CEP (circle of equal probability) is a measure of accuracy, and defined as the radius of the circle centered at the target, at a specific range, in which 50 percent of the payloads impact.
- (3) A "guidance set" integrates the process of measuring and computing a vehicle's position and velocity (i.e. navigation) with that of computing and sending commands to the vehicle's flight control systems to correct the trajectory.
- (4) Examples of methods of achieving thrust vector control which are covered by (e) include:
  - (i) Flexible nozzle;
  - (ii) Fluid or secondary gas injection;
- (iii) Movable engine or nozzle; Deflection of exhaust gas stream (jet vanes or probes); or
  - (v) Use of thrust tabs.

### ITEM 3—CATEGORY II

Propulsion components and equipment usable in the systems in Item 1, as follows:

- (a) Lightweight turbojet and turbofan engines (including) turbocompound engines) that are small and fuel efficient (see §121.1, both Cat. IV(h) and VIII(b));
- (b) Ramjet/Scramjet/pulse jet/combined cycle engines, including devices to regulate combustion, and specially designed components therefor (see §121.1, both Cat. IV(h) and Cat. VIII(b));
- (c) Rocket motor cases, "interior lining", "insulation" and nozzles therefor (see §121.1, Cat. IV(h) and Cat. V(c));
- (d) Staging mechanisms, separation mechanisms, and interstages therefor (see §121.1, Cat. IV(c) and (h));
- (e) Liquid and slurry propellant (including oxidizers) control systems, and specially designed components therefor, designed or modified to operate in vibration environments of more than 100 g RMS between 20 Hz and 000 Hz (see §121.1, Cat. IV(c) and (h));
- (f) Hybrid rocket motors and specially designed components therefor (see §121.1, Cat. IV(h)).